

# Methodologies for Determining Fee Emissions for Consumer Products Manufacturers

for

## Fiscal Year 2012-2013

- Fiscal Year (FY) 2012-2013 fees are determined using 2010 volatile organic compound (VOC) emissions.
- Air Resources Board (ARB) staff determined per-company 2010 VOC emissions using combined information from the following surveys:
  - 2001 Air Resources Board (ARB) Consumer and Commercial Products Survey (2001 CP Survey);
  - 2003 ARB Consumer and Commercial Products Survey (2003 CP Survey);
  - 2006 ARB Consumer and Commercial Products Survey (2006 CP Survey);
  - 2008 ARB Paint Thinner and Multi-purpose Solvent Survey (2008 PT and MPS Survey); and
  - 2010 ARB Aerosol Coatings and Aerosol Adhesives Product Survey (2010 AC and AA Survey)
- The survey data were used except for those companies that elected to submit more recent information. If a company submitted comprehensive product sales and formulation information for 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, or 2010, this information was used in combination with information from the surveys conducted after a company submittal. In cases where emissions information for a specific product category was available from more than one survey or a comprehensive product sales and formulation submittal, only the most recent data set was used.
- VOC emissions may have been adjusted by California population growth. The table below lists approximate percent increases in population in California between the year of data submittal and 2010 base year.

<b>Sales Data Year</b>	<b>CA Population Percent Increase Between Sales Year and 2010</b>
2001	8.13
2002	6.81
2003	5.45
2004	4.38
2005	3.70
2006	2.96
2007	2.10
2008	1.25
2009	0.65
2010	0

The California Department of Finance is the source for the population data.

- For FY 2012-2013, fee emissions adjustments have been made for additional VOC standards that went into effect for 2010, where applicable. When products' VOC content are above these standards, they are adjusted to the VOC limit for their respective categories. The product categories and VOC limits are identified below:

<u>Category</u>	<u>VOC Limit (Percent by Weight)</u>
Astringent/Toner:	
non-aerosol	35
Brake Cleaner	10
Carburetor or Fuel-injection Air Intake Cleaner	10
Carpet/Upholstery Cleaner:	
aerosol	5
non-aerosol (ready-to-use)	1
Dusting Aid:	
aerosol	17
non-aerosol	3
Engine Degreaser:	
aerosol	10
Fabric Protectant:	
non-aerosol	1
Floor Maintenance Product	1
Floor Polish or Wax:	
Resilient Flooring Material	1
Non-resilient Flooring Material	1
Wood Floor Wax	70
General Purpose Degreaser:	
aerosol	10
Motor Vehicle Wash:	
non-aerosol	0.2
Multi-purpose Solvent	30
Odor Remover/Eliminator:	
aerosol	25
non-aerosol	6
Paint Thinner	30
Pressurized Gas Duster	1
Sealant or Caulking Compound:	
Non-chemically Curing:	
non-aerosol	1.5
Shaving Gel	4
Temporary Hair Color:	
aerosol	55
Tire or Wheel Cleaner:	
aerosol	8
non-aerosol	2
Windshield Water Repellant	75

(Source: ARB, Regulation for Reducing VOC Emissions from Consumer Products; available at <http://www.arb.ca.gov/consprod/regs/gencregs.htm>)

- Adjustments were made for product categories surveyed in 2001 CP Survey; 2003 CP Survey; 2006 CP Survey; and 2008 PT and MPS Survey. Adjustments were not made for product categories surveyed in the 2010 AC and AA Survey because the 2010 survey year was the year used to determine fee emissions.
- The 2001, 2003 and 2006 CP Survey product categories are available at these links: <http://www.arb.ca.gov/consprod/regact/2001surv/survey6.pdf>, <http://www.arb.ca.gov/consprod/regact/2003surv/s7.pdf> and <http://www.arb.ca.gov/consprod/regact/2006surv/s13.pdf>.
- Information about 2008 PT and MPS Survey, and 2010 AC and AA Survey is available at these links: <http://www.arb.ca.gov/consprod/regact/tscpwg/letter.pdf> and <http://www.arb.ca.gov/consprod/regact/2010surv/2010surv.htm>.
- Information on previous years' methodologies for determining fee emissions for consumer product manufacturers for FY 2003-2004, FY 2004-2005, FY 2005-2006, FY 2006-2007, FY 2007-2008, FY 2008-2009, FY 2009-2010, FY 2010-2011, and FY 2011-2012 is provided in the "Background Information for Previous Fiscal Years" section below. Some previous years' methodologies are available at <http://www.arb.ca.gov/consprod/regact/feewg/feewg.htm>.
- Aerosol Coatings emissions were determined using sales and VOC ingredient information from the 2010 AC and AA Survey. A direct calculation of VOC emissions using sales and VOC ingredients information was performed.
- Per-company emissions do not reflect survey market coverage adjustments. Adjustment factors are not applicable to individual companies.
- Some information on low vapor pressure (LVP)-VOCs was obtained in the 2003 and 2006 CP Surveys. However, LVP-VOCs are not currently included in the per-company emissions for consumer products. As LVP-VOC data collected through future consumer product surveys is improved, ARB staff will evaluate whether it is appropriate to include per-company emissions of LVP-VOCs that are likely to see an atmospheric fate.

## BACKGROUND INFORMATION FOR PREVIOUS FISCAL YEARS:

- Previous years' methodologies for determining fee emissions for consumer products manufacturers are available at <http://www.arb.ca.gov/consprod/regact/feewg/feewg.htm>.
- FY 2003-2004, FY 2004-2005, FY 2005-2006, FY 2006-2007, FY 2007-2008, FY 2008-2009, FY 2009-2010, FY 2010-2011, and FY 2011-2012 fees were determined using 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 VOC emissions, respectively.
- ARB staff determined per-company 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 VOC emissions using information from the 2003 CP Survey, the 1997 ARB Consumer and Commercial Products Survey (1997 CP Survey) and the 1997 Aerosol Coatings Survey (1997 AC Survey), except where a company elected to submit more recent information. If a company submitted comprehensive product sales and formulation information for 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, or 2009, this information was used.
- VOC emissions determined using the 1997 CP Survey data were adjusted by an approximate 6.92 percent increase in population between 1997 and 2001; an approximate 8.89 percent increase in population between 1997 and 2002; and an approximate 10.91 percent increase in population between 1997 and 2003. VOC emissions determined using comprehensive 2001 information submittals have been adjusted by an approximate 1.76 percent increase in population between 2001 and 2002 and an approximate 3.47 percent increase in population between 2001 and 2003. VOC emissions determined using comprehensive 2002 information submittals have been adjusted by an approximate 1.69 percent increase in population between 2002 and 2003. VOC emissions determined using the 2003 CP Survey data have been adjusted by an approximate 1.42 percent increase in population between 2003 and 2004, an approximate 2.65 percent increase in population between 2003 and 2005, an approximate 3.86 percent increase in population between 2003 and 2006, an approximate 4.92 percent increase in population between 2003 and 2007, an approximate 6.13 percent increase in population between 2003 and 2008, and an approximate 4.77 percent increase in population between 2003 and 2009. Updated population trend information released by California Department of Finance resulted in the use of a smaller approximate percent increase in California between 2003 and 2009.
- No population growth adjustments have been made to 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 VOC emissions from Aerosol Coating products. Equivalent mass-based VOC reductions for general coating categories and specialty coating categories, all of which are controlled with reactivity-based instead of mass-based VOC limits were determined. Additional VOC emission information for Aerosol Coating products may be found in the Initial Statement of Reasons for the Proposed Amendments to the Regulations for Reducing Volatile Organic Compound Emissions from Aerosol Coating Products and Proposed Tables of Maximum Incremental Reactivity (MIR) Values, and Proposed Amendments to Method 310, Release Date: May 5, 2000 (AC MIR ISOR).

- Previous FY 2003-2004 fee emissions were determined using 2001 VOC emissions. Adjustments were made to the VOC content of products in categories with standards that took effect between 1997 and 2001. When products' VOC content are above these standards, they are adjusted to the VOC limit for their respective categories. These product categories and VOC limits are identified below:

<b><u>Category</u></b>	<b><u>VOC Limit (Percent by Weight)</u></b>
Carpet and Upholstery Cleaner:	
aerosol	7
non-aerosol (ready to use)	3
non-aerosol (dilutable)	0.1
Hair Spray	55
Insecticide:	
Crawling Bug Insecticide (all forms)*	20
Personal Fragrance Product:	
with 20 percent or less fragrance	75
with more than 20 percent fragrance	65
Spot Remover:	
aerosol	25
non-aerosol	8
Automotive Instant Detailer	3

\*Note: For a product regulated under the Federal Insecticide, Fungicide, and Rodenticide Act, the limit is effective one year after the date specified in the Table of Standards.

(Source: ARB, Regulation for Reducing VOC Emissions from Consumer Products; available at <http://www.arb.ca.gov/consprod/regs/gencregs.htm>)

- Previous FY 2004-2005 fee emissions were determined using 2002 VOC emissions. Adjustments were made for additional standards that took effect in 2002, where applicable. When products' VOC content are above these standards, they are adjusted to the VOC limit for their respective categories. These product categories and VOC limits are identified below:

<b><u>Category</u></b>	<b><u>VOC Limit (Percent by Weight)</u></b>
Aerosol Adhesive:	55
Mist Spray	65
Web Spray	55
Special Purpose Spray Adhesive:	
Mounting, Automotive Engine	
Compartment, and Flexible Vinyl Adhesive	70
Polystyrene Foam and Automobile Headliner	65
Polyolefin and Laminate Repair/Edgebanding	60
Bug and Tar Remover	40
General Purpose Degreaser:	
aerosol	50
Non-selective Terrestrial Herbicide:	
non-aerosol*	3
Undercoating:	
aerosol	40

\*Note: For a product regulated under the Federal Insecticide, Fungicide, and Rodenticide Act, the limit is effective one year after the date specified in the Table of Standards. No adjustments were made to 2002 VOC emissions.

(Source: ARB, Regulation for Reducing VOC Emissions from Consumer Products; available at <http://www.arb.ca.gov/consprod/regs/gencregs.htm>)

- Previous FY 2005-2006 fee emissions were determined using 2003 VOC emissions. Adjustments were made for additional standards that took effect in 2003, where applicable. When products' VOC content are above these standards, they are adjusted to the VOC limit for their respective categories. These product categories and VOC limits are identified below:

<b><u>Category</u></b>	<b><u>VOC Limit (Percent by Weight)</u></b>
Adhesive:	
Construction, Panel, and Floor Covering	15
Automotive Brake Cleaner	45
Automotive Windshield Washer Fluid:	
all other areas (all forms) **	
dilutable and pre-mixed	1
Carburetor or Fuel-Injection Air Intake Cleaner	45
Hair Mousse	6
Multi-purpose Lubricant:	
(excluding solid or semisolid products)	50
Non-selective Terrestrial Herbicide:	
non-aerosol*	3
Penetrant	50
Rubber and Vinyl Protectant:	
non-aerosol	3
Sealants and Caulking Compound	4
Tire Sealant and Inflator	20

\*Note: For a product regulated under the Federal Insecticide, Fungicide, and Rodenticide Act, the limit is effective one year after the date specified in the Table of Standards. Adjustments were made to 2003 VOC emissions.

\*\*Note: "All other areas" excludes "Type A Areas." "Type A Areas" consists of Del Norte, Shasta and Trinity Counties; and the Great Basin Valley, Lake Tahoe, Mountain Counties, and Northeast Plateau Air Basins.

(Source: ARB, Regulation for Reducing VOC Emissions from Consumer Products; available at <http://www.arb.ca.gov/consprod/regs/gencregs.htm>)

- Previous FY 2006-2007 fee emissions were determined using 2004 VOC emissions. Adjustments may have been made for products with VOC content above their respective standards. Since there were no new standards effective in 2004, adjustments were made only to products for VOC standards that took effect in 2003, where applicable, as these were assumed to be in a 3-year sell through period.

- Previous FY 2007-2008 fee emissions were determined using 2005 emissions. Adjustments have been made to VOC content of products in categories with standards that took effect in 2005, where applicable. When products' VOC content are above these standards, they are adjusted to the VOC limit for their respective categories. These product categories and VOC limits are identified below:

<b><u>Category</u></b>	<b><u>VOC Limit (Percent by Weight)</u></b>
Air Freshener:	
Double phase aerosol	25
Automotive Rubbing or Polishing Compound	17
Automotive Wax/Polish/Sealant/Glaze:	
all other forms	15
hard paste waxes	45
Engine Degreaser:	
aerosol	35
non-aerosol	5
Furniture Maintenance Product:	
aerosol	17
General Purpose Cleaner:	
non-aerosol	4
General Purpose Degreaser:	
non-aerosol	4
Glass Cleaner:	
non-aerosol	4
Hair Shine	55
Heavy-duty Hand Cleaner or Soap	8
Insecticide*:	
Flying bug:	
aerosol	25
Lawn and garden:	
non-aerosol lawn and garden insecticide	3
Metal Polish/Cleanser	30
Nail Polish Remover	0
Paint Remover or Stripper	50
Rubber and Vinyl Protectant:	
aerosol	10
Silicone-based Multi-purpose Lubricant: (excluding solid or semisolid products)	60

\*Note: For a product regulated under the Federal Insecticide, Fungicide, and Rodenticide Act, the limit is effective one year after the date specified in the Table of Standards. Adjustments were made to 2005 VOC emissions.

(Source: ARB, Regulation for Reducing VOC Emissions from Consumer Products; available at <http://www.arb.ca.gov/consprod/regs/gencregs.htm>)



- Previous FY 2008-2009 fee emissions were determined using 2006 emissions. Two limits went into effect in 2006 due to the one year extension of the effective date for products regulated under the Federal Insecticide, Fungicide, and Rodenticide Act. When products' VOC content are above the standards that came into effect in the fee base year, they are adjusted to the VOC limit for their respective categories. However, no adjustments have been made to VOC content for products in these categories because they were not surveyed in the 2003 CP Survey. Adjustments will be made to these product categories after the 2006 ARB Consumer and Commercial Products Survey (2006 CP Survey) submittals are received and evaluated. These product categories and VOC limits are identified below:

<b><u>Category</u></b>	<b><u>VOC Limit (Percent by Weight)</u></b>
Crawling Bug Insecticide*: aerosol	15
Wasp and Hornet Insecticide	40

\*Note: For a product regulated under the Federal Insecticide, Fungicide, and Rodenticide Act, the limit is effective one year after the date specified in the Table of Standards.

(Source: ARB, Regulation for Reducing VOC Emissions from Consumer Products; available at <http://www.arb.ca.gov/consprod/regs/gencregs.htm>)

- Previous FY 2009-2010 fee emissions were determined using 2007 VOC emissions. Adjustments have been made for additional standards that took effect in 2007, where applicable. When products' VOC content are above these standards, they are adjusted to the VOC limit for their respective categories. These product categories and VOC limits are identified below:

<b><u>Category</u></b>	<b><u>VOC Limit (Percent by Weight)</u></b>
Contact Adhesive- General Purpose	55
Contact Adhesive- Special Purpose	80
Floor or Wall Covering Adhesive Remover	5
Gasket or Thread Locking Adhesive Remover	50
General Purpose Adhesive Remover	20
Specialty Adhesive Remover	70
Anti-Static Product:	
non-aerosol	11
Electric Cleaner	45
Fabric Refresher:	
aerosol	15
non-aerosol	6
Footwear or Leather Care Product:	
aerosol	75
solid	55
all other forms	15
Graffiti Remover	
aerosol	50
non-aerosol	30
Hair Styling Product:	
aerosol and pump spray	6
all other forms	2
Shaving Gel:	
aerosol	7
non-aerosol	7
Toilet Urinal Care Product:	
aerosol	10
non-aerosol	3
Wood Cleaner:	
aerosol	17
non-aerosol	4

(Source: ARB, Regulation for Reducing VOC Emissions from Consumer Products; available at <http://www.arb.ca.gov/consprod/regs/gencregs.htm>)

- Previous FY 2010-2011 fee emissions were determined using 2008 emissions. Two limits went into effect in 2008. However, no adjustments have been made to VOC content for products in these categories because they were not surveyed in the 2003 CP Survey. These product categories and VOC limits are identified below:

<b><u>Category</u></b>	<b><u>VOC Limit (Percent by Weight)</u></b>
Electronic Cleaner	75
Nail Polish Remover	1

(Source: ARB, Regulation for Reducing VOC Emissions from Consumer Products; available at <http://www.arb.ca.gov/consprod/regs/gencregs.htm>)

- Previous FY 2011-2012 fee emissions were determined using 2009 emissions. Adjustments have been made for additional standards that took effect in 2009, where applicable. When products' VOC content are above these standards, they are adjusted to the VOC limit for their respective categories. These product categories and VOC limits are identified below:

Anti-static Product:	
aerosol	80
Automotive Windshield Washer Fluid:	
Type "A" areas	25
Bathroom and Tile Cleaner:	
non-aerosol	1
Brake Cleaner	20
Carburetor or Fuel-injection Air Intake Cleaner	20
Construction, Panel & Floor Covering Adhesive	7
Disinfectant:	
aerosol	70
non-aerosol	1
Furniture Maintenance Product:	
non-aerosol (except solid/paste forms)	3
General Purpose Cleaner:	
aerosol	8
General Purpose Degreaser:	
aerosol	20
Laundry Starch/Sizing/Fabric Finish Product	4.5
Oven Cleaner:	
non-aerosol (including pump spray and liquid)	1
Sanitizer:	
aerosol	70
non-aerosol	1

(Source: ARB, Regulation for Reducing VOC Emissions from Consumer Products; available at <http://www.arb.ca.gov/consprod/regs/gencregs.htm>)

## REFERENCES

Air Resources Board. (1998a), Initial Statement of Reasons for the Proposed Amendments to the Regulations for Reducing Volatile Organic Compound Emission from Aerosol Coatings, Antiperspirants and Deodorants, and Consumer Products. October 2, 1998.